Claims:

1. An apparatus for delivering a medical device to a desired location within a patient's body; comprising:

an elongated device body having a proximal end and a distal end and having an internal, longitudinally extending lumen open to the distal end of the device body; and

a stabilizing mechanism located at the distal end of the device body, the stabilizing mechanism in turn comprising:

a tubular elastic member having a proximal end attached to the device body and having first length and a first outer circumference in a first configuration;

means for causing the tubular member to change from the first configuration to a second configuration by elastically stretching the tubular elastic member longitudinally to a second length greater than the first length and thereby causing the tubular member to neck down to a second diameter smaller than the first diameter; and

means for causing the tubular elastic member to change from the second configuration to a third configuration having a third length less than the second length and a third circumference greater than the second circumference.

2. An apparatus according to claim 1, wherein the tubular elastic member comprises a non-corrugated tubular member wherein the means for causing the tubular member to change from the second configuration to a third configuration comprises means for causing the tubular member to change from the second configuration to a third configuration having at least one corrugation which has the third outer circumference.

3. An apparatus according to claims 1 or claim 2, wherein the means for causing the tubular member to change from the second configuration to a third configuration comprises means for causing the tubular member to change from the second

configuration to a third configuration wherein the third length is less than the first length.

4. An apparatus according to claim 1 or claim 2 wherein the tubular elastic member comprises a generally cylindrical tubular member.

5. An apparatus according to claim 1 or claim 2 wherein the tubular elastic member tapers distally.

6. An apparatus according to claim 1 or claim 2 wherein the means for causing the tubular member to change from the first configuration to a second configuration comprises a longitudinally movable tubular member within the device body, coupled to a distal portion of the elastic tubular member.

7. An apparatus according to claim 1 or claim 2 wherein the means for causing the tubular member to change from the first configuration to a second configuration comprises a longitudinally movable solid member within the device body, coupled to a distal portion of the elastic tubular member.

8. An apparatus according to claim 1 or claim 2 wherein the means for causing the tubular member to change from the first configuration to a second configuration comprises a longitudinally movable stylet engaging the distal portion of the elastic tubular member.

9. An apparatus according to claim 1 or claim 2 wherein the means for causing the tubular member to change from the first configuration to a second configuration comprises a longitudinally movable coil engaging the distal portion of the elastic tubular member.

10. An apparatus according to claim 1 or claim 2 wherein the means for causing the tubular member to change from the second configuration to a third configuration comprises the resiliency of the tubular member.

11. An apparatus according to claim 1 or claim 2 wherein the means for causing the tubular member to change from the second configuration to a third configuration comprises a coil extending through the resilient tubular member.

12. An apparatus according to claim 1 or claim 2 wherein the means for causing the tubular member to change from the second configuration to a third configuration comprises a spring coil extending through the resilient tubular member.

13. An apparatus according to claim 1 or claim 2 wherein the means for causing the tubular member to change from the second configuration to a third configuration comprises a longitudinally movable tubular member within the device body, coupled to a distal portion of the elastic tubular member.

14. An apparatus according to claim 1 or claim 2 wherein the means for causing the tubular member to change from the second configuration to a third configuration comprises a longitudinally movable coil within the device body, coupled to a distal portion of the elastic tubular member.

15. An apparatus according to claim 1 or claim 2 wherein the means for causing the tubular member to change from the second configuration to a third configuration comprises a longitudinally movable solid member within the device body, coupled to a distal portion of the elastic tubular member.

16. An apparatus according to claim 1 or claim 2 wherein the means for causing the tubular member to change from the second configuration to a third configuration comprises a longitudinally movable stylet within the device body, coupled to a distal portion of the elastic tubular member.

17. An apparatus for delivering a medical device to a desired location within a patient's body; comprising:

an outer tube having proximal and distal ends and provided with at least one inwardly directed projection and having a radially extending first flange adjacent its distal end; and

an inner tube located within and longitudinally movable within the outer tube and having proximal and distal ends and having a radially extending second flange adjacent its distal end, located distal to the distal end of the outer tube and provided with at least one inwardly directed projection engageable with the inwardly directed projection of the outer tube and having a radially extending second flange adjacent its distal end, located distal to the distal end of the outer tube; wherein:

at least one of the inner and outer tubes are provided with a plurality of longitudinally spaced projections such the inwardly and outwardly directed projections may engage one another at multiple locations.

18. An apparatus according to claim 17 wherein the inner and outer tubes are rotatable relative to one another such that the tubes may be rotated between a first position in which the inwardly and outwardly directed projections are aligned and interlock and a second position in which the projections are angularly displaced from one another and the first and second tubes are longitudinally movable with respect to one another.

19. An apparatus according to claim 17 or claim 18 wherein first and second flanges extend longitudinally between proximal and distal ends and wherein the second flange is a resilient, generally conical flange having its largest diameter adjacent its distal end and wherein the first flange is a resilient, generally conical flange having its largest diameter adjacent its proximal end.

20. An ablation catheter, comprising:

a catheter body having proximal and distal ends and having a longitudinally extending internal lumen and carrying an elongated conductor therein;

a catheter head located at distal portion of the catheter body, the catheter head provided with a longitudinally extending recess in fluid communication with the lumen of the lead body and having flanges extending laterally from the recess; and

an electrode coupled to the conductor within the lead body and extending along the recess.

21. An ablation catheter according to claim 20, wherein the electrode is located within the recess.

22. An ablation catheter, comprising:

a catheter body having proximal and distal ends and having a longitudinally extending internal lumen and carrying an elongated conductor therein;

a catheter head located at distal portion of the catheter body, the catheter head provided with a longitudinally extending series of recesses in fluid communication with the lumen of the lead body and having flanges extending laterally from the recess; and

an electrode coupled to the conductor within the lead body and extending along the series of recesses.

23. An ablation catheter according to claim 22, wherein the electrode is located alongside the recess.

24. An ablation catheter, comprising:

a catheter body having proximal and distal ends and having a longitudinally extending internal lumen and carrying an elongated conductor therein;

a catheter head located at distal portion of the catheter body, the catheter head provided with a recess in fluid communication with the lumen of the lead body and having flanges extending laterally from the recess; and

an electrode coupled to the conductor within the lead body and extending alongside the recess.

25. An ablation catheter, comprising:

a catheter body having proximal and distal ends and having a longitudinally extending internal lumen and carrying an elongated conductor therein;

a catheter head located at distal portion of the catheter body, the catheter head provided with a recess in fluid communication with the lumen of the lead body and having flanges extending laterally from the recess; and

an electrode coupled to the conductor within the lead body and located within the recess.

26. A method of accessing a desired location within a patient's body; comprising:

advancing to tissue adjacent the desired location a device comprising an elongated device body having a proximal end and a distal end and having an internal, longitudinally extending lumen open to the distal end of the device body, and a stabilizing mechanism located at the distal end of the device body, the stabilizing mechanism in turn comprising a tubular elastic member having a proximal end attached to the device body and having first length and a first outer circumference;

passing the tubular member through the body tissue to reach the desired site and causing the tubular member to change from the first configuration to a second configuration by elastically stretching the tubular elastic member longitudinally to a second length greater than the first length and thereby causing the tubular member to neck down to a second diameter smaller than the first diameter; and

thereafter causing the tubular elastic member to change from the second configuration to a third configuration having a third length less than the second length and a third circumference greater than the second circumference to anchor the device body to the body tissue.

27. A method according to claim 26, wherein advancing the catheter comprises advancing a catheter wherein the tubular elastic member comprises a non-corrugated

tubular member wherein causing the tubular member to change from the second configuration to a third configuration comprises causing the tubular member to have at least one corrugation which has the third outer circumference.

28. A method according to claim 26 or claim 27, causing the tubular member to change from the second configuration to a third configuration comprises causing the tubular member to have a third length less than the first length.

29. A method according to claim 26 or claim 27 wherein advancing the catheter comprises advancing a device having a tubular elastic member which comprises a generally cylindrical tubular member.

30. An apparatus according to claim 26 or claim 27 advancing the catheter comprises advancing a device having a tubular elastic member which tapers distally.

31. A method of accessing a desired location within a patient's body; comprising

advancing to tissue adjacent the desired location a device comprising an outer tube having proximal and distal ends and provided with at least one inwardly directed projection and having a radially extending first flange adjacent its distal end and an inner tube located within and longitudinally movable within the outer tube and having proximal and distal ends and having a radially extending second flange adjacent its distal end, located distal to the distal end of the outer tube and provided with at least one inwardly directed projection engageable with the inwardly directed projection of the outer tube and having a radially extending second flange adjacent its distal end, located distal to the distal end of the outer tube, wherein at least one of the inner and outer tubes are provided with a plurality of longitudinally spaced projections such the inwardly and outwardly directed projections may engage one another at multiple locations;

passing the distal portion of the inner tube and the second flange through the body tissue to the desired site and

longitudinally moving the outer tube distally relative to the inner tube and engaging the inwardly and outwardly projections with one another to stabilize the device in the body tissue.

32. A method according to claim 31, wherein:

advancing the device comprises advancing a device wherein the inner and outer tubes are rotatable relative to one another such that the outer tube may be rotated relative to the inner tube between a first position relative to the inner tube in which the inwardly and outwardly directed projections are aligned and interlock and a second position relative to the inner tube in which the projections are angularly displaced from one another and the first and second tubes are longitudinally movable with respect to one another;

wherein longitudinally moving the outer tube distally relative to the inner tube comprises moving the outer tube while in the first position relative to the inner tube; and

wherein engaging the inwardly and outwardly projections with one another comprises rotating the outer tube to the second position relative to the inner tube.

33. A method according to claim 31 or claim 32 wherein advancing the device comprises advancing a device wherein the first and second flanges extend longitudinally between proximal and distal ends and wherein the second flange is a resilient, generally conical flange having its largest diameter adjacent its distal end and wherein the first flange is a resilient, generally conical flange having its largest diameter adjacent its proximal end.

34. A method of ablation, comprising:

advancing to a desired site an ablation catheter comprising a catheter body having proximal and distal ends and having a longitudinally extending internal lumen and carrying an elongated conductor therein; a catheter head located at distal portion of the catheter body, the catheter head provided with a longitudinally extending recess in fluid communication with the lumen of the lead body and having flanges extending

laterally from the recess; and an electrode coupled to the conductor within the lead body and extending along the recess;

applying suction to the lumen within the lead body to draw the tissue into the recess and into contact with the electrode; and

applying RF energy to the conductor.

35. A method of ablation, comprising:

advancing to a desired site an ablation catheter comprising a catheter body having proximal and distal ends and having a longitudinally extending internal lumen and carrying an elongated conductor therein; a catheter head located at distal portion of the catheter body, the catheter head provided with a longitudinally extending series of recesses in fluid communication with the lumen of the lead body and having flanges extending laterally from the recess; and an electrode coupled to the conductor within the lead body and extending along the series of recesses;

applying suction to the lumen within the lead body to draw the tissue against the recesses and into contact with the electrode; and

applying RF energy to the conductor.

36. A method of ablation, comprising:

advancing to a desired site an ablation catheter comprising a catheter body having proximal and distal ends and having a longitudinally extending internal lumen and carrying an elongated conductor therein; a catheter head located at distal portion of the catheter body, the catheter head provided with a recess in fluid communication with the lumen of the lead body and having flanges extending laterally from the recess; and an electrode coupled to the conductor within the lead body and extending alongside the recess;

applying suction to the lumen within the lead body to draw the tissue against the recesses and into contact with the electrode; and

applying RF energy to the conductor.

37. A method of ablation, comprising:

advancing to a desired site an ablation catheter comprising a catheter body having proximal and distal ends and having a longitudinally extending internal lumen and carrying an elongated conductor therein; a catheter head located at distal portion of the catheter body, the catheter head provided with a recess in fluid communication with the lumen of the lead body and having flanges extending laterally from the recess; and an electrode coupled to the conductor within the lead body and located within the recess;

applying suction to the lumen within the lead body to draw the tissue into the recess and into contact with the electrode; and

applying RF energy to the conductor.

38. An apparatus for accessing a desired location within a patient's body; comprising:

a tubular body having an internal lumen therein, having proximal and distal ends and provided with a helical fixation member extending from the distal end and a resilient seal sealing the lumen at the distal end of the tubular body, and

an elongated member passing through the lumen, through the resilient seal and through the helical fixation member.

39. An apparatus for delivering fluid to a desired location within a patient's body; comprising:

an outer tubular body having an internal lumen therein, having proximal and distal ends and provided with a laterally extending portion adjacent its distal end;

an inner tubular member slidably located within the outer tubular member, having proximal and distal ends and provided with a laterally extending portion adjacent its distal end; and

a fluid delivery catheter slidably located in the inner tubular member, having proximal and distal ends and provided with laterally directed fluid delivery ports adjacent its distal end, the distal end of the fluid delivery catheter being locatable within the inner tubular member.

40. An apparatus for delivering fluid to a desired location within a patient's body; comprising:

a tubular member, having proximal and distal ends and provided with a means adjacent its distal end for stabilizing the tubular member relative to body tissue through which the tubular member may extend,; and

a fluid delivery catheter slidably located in the tubular member, having proximal and distal ends and provided with laterally directed fluid delivery ports adjacent its distal end, the distal end of the fluid delivery catheter being locatable within the tubular member.